What is claimed is:

1. A device for cryoablating exposed tissue which comprises:

a tube-shaped shaft formed with a lumen, said shaft having a proximal end and a distal end;

a flexible enclosure having an outer surface and an inner surface, with the inner surface thereof forming a cryochamber with an opening, said enclosure being attached to the distal end of said shaft for fluid communication through the opening between the lumen of said shaft and the cryochamber of said enclosure;

a shapeable element attached to the distal end of said shaft and extending therefrom into the cryochamber of the enclosure to selectively establish a configuration for said enclosure; and

a means for cooling said enclosure to cryoablate tissue in contact with the outer surface of said enclosure.

2. A device as recited in claim 1 wherein the cryochamber is cylindrical shaped and said enclosure is made of a thermo-conductive material.

3. A device as recited in claim 2 wherein the thermo-conductive material has a thermal conductivity in a range of 2-100 W/mK.

4. A device as recited in claim 1 wherein said shapeable element is rod-shaped.

5. A device as recited in claim 4 wherein said shapeable element is made of copper.

6. A device as recited in claim 1 wherein said cooling means comprises:

a source for holding a cryo-fluid in a liquid state;

a high-pressure tube having a distal end and a proximal end, with the proximal end thereof connected in fluid communication with said source to extend said high-pressure tube therefrom through the lumen of said shaft; and

a capillary tube positioned in the cryochamber and connected in fluid communication with the distal end of said high-pressure tube to transition the cryo-fluid from its liquid state into a gaseous state to cool said enclosure.

7. A device as recited in claim 6 wherein said cryo-fluid is Nitrous Oxide.

8. A device for cryoablating tissue having an exposed surface, said device comprising:

a flexible enclosure having an outer surface for contacting the exposed tissue and an inner surface, with said inner surface thereof forming a cryochamber;

a shapeable element disposed in said cryochamber, said shapeable element being deformable from a first shape wherein said shapeable element is substantially straight and elongated to a second shape wherein said shapeable element reconfigures a portion of said outer surface of said enclosure to substantially conform with a portion of the exposed surface of the tissue; and

a means for delivering a cryo-fluid into said cryo-chamber for expansion therein to cool said enclosure and cryoablate tissue in contact with the outer surface of said enclosure.

9. A device as recited in claim 8 wherein the cryochamber is cylindrical shaped and said enclosure is made of a thermo-conductive material.

10. A device as recited in claim 8 wherein said shapeable element is rod-shaped.

11. A device as recited in claim 10 wherein said shapeable element is made of copper.

12. A device as recited in claim 8 wherein said delivering means comprises a tube-shaped shaft formed with a lumen.

13. A device as recited in claim 12 wherein said cooling means further comprises:

a source for holding a cryo-fluid in a liquid state;

a high-pressure tube having a distal end and a proximal end, with the proximal end thereof connected in fluid communication with said source to extend said high-pressure tube therefrom through the lumen of said shaft; and

a capillary tube connected in fluid communication with the distal end of said high-pressure tube to transition the cryo-fluid from its liquid state into a gaseous state to cool said enclosure.

14. A device as recited in claim 13 wherein said cryo-fluid is Nitrous Oxide.

15. A method for cryoablating tissue, said method comprising the steps of:

providing a device including a shaft having a proximal end and a distal end, said device further including a flexible enclosure attached to the distal end of said shaft, said enclosure having an outer surface and an inner surface, with the inner surface thereof forming a cryochamber, said device further including a shapeable element attached to the distal end of said shaft and extending therefrom into the cryochamber;

exposing the tissue;

deforming said shapeable element to selectively establish a configuration for said enclosure;

contacting the tissue with said outer surface of said enclosure; and

introducing a cryo-fluid into said enclosure to cool said enclosure and cryoablate the tissue.

16. A method as recited in claim 15 wherein the tissue is myocardial tissue.

17. A method as recited in claim 15 wherein said deforming step is performed subsequent to said exposing step.

18. A method as recited in claim 15 wherein the tissue has an exposed surface and wherein said deforming step establishes a configuration for said enclosure wherein a portion of said outer surface of said enclosure substantially conforms with a portion of the exposed surface of the tissue.

19. A method as recited in claim 15 wherein said shapeable element is rod-shaped and made of copper.

20. A method as recited in claim 15 wherein said introducing step comprises the steps of:

holding a cryo-fluid in a liquid state;

passing said cryo-fluid through a high-pressure tube; and thereafter

passing said cryo-fluid through a capillary tube to transition said cryo-fluid from said liquid state into a gaseous state to cool said enclosure.